

Lab Exercise: java.date





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Lab Exercise

java.date

The new java.date package in Java SE 8 provides an easy to use, and immutable library for handling dates and times.

In this lab, you will challenge yourself to create a lambda which relies on the LocalDate methods to determine if an order is a “priority order.”

Specifically, in this lab you will:

- Create a lambda
- Instantiate LocalDate objects
- Use LocalDate methods to compare one to another.

Scenario

The store has been a massive success. In fact, the average order amount this month has been over \$3,000! Unfortunately, that also means that there were more “Priority Orders” than expected, which, in turn, has caused some customers orders to be delayed for over a month! To get things back on track, you’ve been tasked to temporarily change the priority order criteria: if one month (or more) has placed since an order was created, it should be treated as a priority.

Step 1: On Your Own: Change the lambda implementation to work with LocalDate to determine if an order has been sitting around for a month or longer (but leave the signature of the isRushable() method alone).

If it has been sitting around for a month or longer, return true. Otherwise, return false.

Step 2: Inside of TestOrders.java, create a new “hammer” order with a date that falls within 15 days from today.

```
// Change this date to one that is within the last 15 days of
today.
MyDate hammerDate = new MyDate( 5, 17, 2016 );
Solid hammerType = new Solid( "Acme Hammer", 281, 0.3,
    UnitOfMeasureType.CUBIC METER, false, 100, 0.25, 0.3 );
Order hammer = new Order( hammerDate, 10.00, "Wile E Coyote",
    hammerType, 10 );
```

Step 3: Verify that the anvil is considered a priority item and the hammer is not.

```
System.out.println("Anvil isPriorityOrder: " +
    anvil.isPriorityOrder());
System.out.println("Hammer isPriorityOrder: " +
    hammer.isPriorityOrder());Lab Solutions
```

Lab Solutions

TestOrders.java

```
package com.acme.testing;

import com.acme.domain.Order;
import com.acme.domain.Service;
import com.acme.domain.Solid;
import com.acme.domain.Good.UnitOfMeasureType;
import com.acme.utils.MyDate;

public class TestOrders {

    public static void main(String[] args) {
        MyDate date1 = new MyDate(1, 20, 2008);
        Solid s1 = new Solid("Acme Anvil", 1668, 0.3,
            UnitOfMeasureType.CUBIC_METER, false, 500, 0.25, 0.3);
        Order anvil = new Order(date1, 2000.00, "Wile E Coyote", s1,
10);

        MyDate date2 = new MyDate(4, 10, 2008);
        Solid s2 = new Solid("Acme Balloon", 1401, 15,
            UnitOfMeasureType.CUBIC_FEET, false, 10, 5, 5);

        // Change this date to one that is within
        // the last 15 days of today.
        MyDate hammerDate = new MyDate( 5, 17, 2016 );
        Solid hammerType = new Solid( "Acme Hammer", 281, 0.3,
            UnitOfMeasureType.CUBIC_METER, false, 100, 0.25, 0.3 );
        Order hammer = new Order( hammerDate, 10.00, "Wile E Coyote",
            hammerType, 10 );

        Order.setRushable( (orderDate, orderAmount) -> {
            // Create a LocalDate object for now.
            LocalDate now = LocalDate.now();
            // Create a LocalDate object for the order date.
            LocalDate orderDatePlus30 =
LocalDate.of(orderDate.getYear(),
                orderDate.getMonth(), orderDate.getDay());
            // Add one month to the order date.
            orderDatePlus30 = orderDatePlus30.plusMonths(1);
            // If the current date is after the order date + one
month,
            // it's rushable.
            return now.isAfter(orderDatePlus30);
        } );
    }
}
```

```
System.out.println("Anvil isPriorityOrder: " +  
    anvil.isPriorityOrder()); // True  
System.out.println("Hammer isPriorityOrder: " +  
    hammer.isPriorityOrder()); // False  
  
    ....  
}  
}
```

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